

Ref. 1

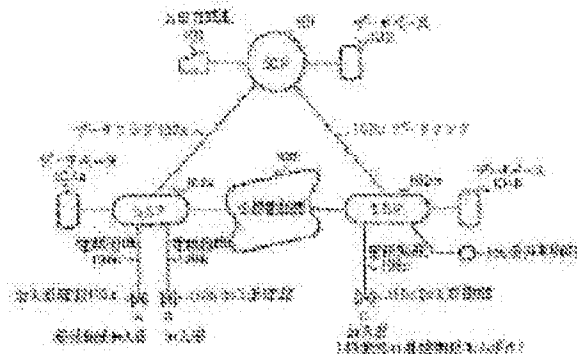
特許

INCOMING CALL TRANSFER SYSTEM**Publication number:** JP5316233 (A)**Publication date:** 1993-11-26**Inventor(s):** AOKI YUTAKA**Applicant(s):** NIPPON ELECTRIC CO**Classification:****- international:** H04M3/42; H04M3/54; H04Q3/545; H04M3/42; H04M3/54;
H04Q3/545; (IPC1-7): H04M3/54; H04M3/42**- European:****Application number:** JP19920114973 19920507**Priority number(s):** JP19920114973 19920507**Also published as:**

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Abstract of JP 5316233 (A)

PURPOSE: To prevent an erroneous incoming call transfer, and to attain an incoming call to a subscriber's telephone whose incoming call transfer is registered. **CONSTITUTION:** Service switch points 102a and 102b operate an incoming call transfer destination registration and an incoming call transfer mode setting from a subscriber's telephone 110c at the destination of movement based on the control of a service control point 101, and operates an incoming call from the subscriber's telephone 110c at the destination of movement to a subscriber's telephone 110a whose incoming call transfer is registered based on the control of the service control point 101.



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- 1.This document has been translated by computer. So the translation may not reflect the original precisely.
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- 3.In the drawings, any words are not translated.

[Detailed Description of the Invention]

[0001]

[Industrial Application]This invention is used for the call redirection method of an electronic switching system. It is related with the call redirection method of the telephone exchange network which comprises a service control point (SCP) and service switchpoint (SSP) especially.

[0002]

[Description of the Prior Art]Drawing 5 is a block lineblock diagram of the call redirection method of a conventional example.

[0003]Conventionally, the call redirection method was composition as shown in drawing 5. In drawing 5, the member A explains below the call redirection method with which the member B dials and does call redirection of the member's A telephone number after setting the destination as the member's C position.

[0004]The registration method of the introduction call redirection point is explained. The member A who is having call redirection permitted uses the telephone 110a and the telephone line 109a, and registers the call redirection point by dialing the member's C telephone number after a call redirection access code. Even if the member C answers and it does not carry out, the call redirection point is registered. The registered call redirection point telephone number is stored in the database 202a.

[0005]Next, starting of call redirection and a stopping method are explained. When the member A dials the access code for starting from the telephone 110a, call redirection will be in activation status. Call redirection will be in a halt condition by dialing the access code for a stop.

[0006]Finally operation of a call redirection method is explained. In call redirection, in activation status, the member B dials the member's A telephone number using the telephone 110b and the telephone line 109b. Since the telephone line 109a which should receive a message is call redirection mode, it makes the service switchpoint 201a receive a message in the telephone line 109c which takes out a transfer destination telephone number from the database 202a, and is accommodated in the service switchpoint 201b via the public telephone network 108. Call redirection is completed by the above.

[0007]

[Problem(s) to be Solved by the Invention]However, in such a call redirection method of

a conventional example, when registering a transfer destination telephone number and the mistaken telephone number was dialed, there was a problem of receiving a message in the destination which is completely unrelated. The member under call redirection registration had the problem that a message could not be made to receive if registration cancellation is not once carried out.

[0008]It aims at providing the call redirection method which this invention can solve the above-mentioned problem, and can prevent the mistaken call redirection, and can receive a message also in the subscriber telephone under call redirection registration.

[0009]

[Means for Solving the Problem]Service switchpoint which this invention is connected to a public telephone network, and performs a telephone exchange, Have a subscriber telephone connected to this service switchpoint via a telephone line, and the above-mentioned service switchpoint, The first database that stores a call redirection point telephone number to a subscriber telephone of a call redirection member using call redirection which a self-point accommodates, A call redirection method containing a call redirection means to perform call redirection to a subscriber telephone of a movement destination based on the contents of this first database is characterized by comprising:

A call redirection point registration means by which it has a service control point which controls the above-mentioned service switchpoint, and the above-mentioned service switchpoint performs call redirection point registration from a subscriber telephone of the above-mentioned movement destination, and call redirection mode setting based on control of the above-mentioned service control point.

A call redirection subscriber telephone arrival means to perform arrival to a subscriber telephone under call redirection registration from a subscriber telephone of the above-mentioned movement destination based on control of the above-mentioned service control point.

[0010]This invention the above-mentioned service control point, The second database with which a temporary telephone number beforehand assigned to a call redirection member's telephone number, a personal identification number, and a telephone number under call redirection registration was set up is included, A call redirection point registration means to accommodate a subscriber telephone of the above-mentioned movement destination, Based on a mail arrival place change request from a subscriber telephone of this movement destination, start the above-mentioned service control point, and The above-mentioned call redirection member's telephone number, Including a means to answer based on a Request to Send of a transfer destination telephone number and a personal identification number, the above-mentioned service control point, A judging means this call redirection member judges whether you are an available member with reference to the contents of the second database of the above based on a call redirection member's telephone number and a personal identification number which were answered [above-mentioned] to be, Based on a decision result of this judging means, with reference to the contents of the second database of the above, call redirection mode, A call redirection point registration means to accommodate the above-mentioned call redirection member's subscriber telephone, including a means to transmit a setting request of a temporary telephone number and a transfer destination telephone number to a call redirection

point registration means to accommodate the above-mentioned call redirection member's subscriber telephone, Based on the above-mentioned setting request, set this call redirection member's telephone line as call redirection mode, and This call redirection member's telephone number, A means to set a temporary telephone number and a call redirection point telephone number as the self-first database, and to perform a setting-out completion report to the above-mentioned service control point is included, The above-mentioned service control point contains a means to transmit a temporary telephone number to a call redirection point registration means to accommodate a subscriber telephone of a movement destination based on the above-mentioned setting-out completion report, A call redirection point registration means to accommodate a subscriber telephone of the above-mentioned movement destination, A means to set a temporary telephone number transmitted [above-mentioned] as the self-first database, and to report the completion of setting out to the above-mentioned service control point, A call redirection subscriber telephone arrival means to accommodate a subscriber telephone of the above-mentioned movement destination in a subscriber telephone of this movement destination including a means to notify a temporary telephone number transmitted [above-mentioned], Including a means to input a temporary telephone number from a subscriber telephone of this movement destination, and to transmit this temporary telephone number to the above-mentioned service control point with reference to the contents of the self-first database, the above-mentioned service control point, A means connected to service switchpoint which accommodates the above-mentioned call redirection member's subscriber telephone to service switchpoint which accommodates a subscriber telephone of the above-mentioned movement destination with reference to the second database of the above based on a temporary telephone number transmitted [above-mentioned] is included, A call redirection subscriber telephone arrival means to accommodate the above-mentioned call redirection member's subscriber telephone can contain a means to make the above-mentioned call redirection member's subscriber telephone receive a message with reference to the self-first database.

[0011]Service switchpoint in which this invention accommodates a telephone number of a call redirection member under above-mentioned call redirection registration, Since this call redirection member's telephone line is mail arrival mode when a telephone number of a call redirection member under this call redirection registration is received, a means to pull out that call redirection point telephone number, and to make it receive a message from the self-first database can be included.

[0012]

[Function]Service switchpoint performs call redirection point registration from the subscriber telephone of a movement destination, and call redirection mode setting based on control of a service control point by a call redirection point registration means, A call redirection subscriber telephone arrival means performs arrival to the subscriber telephone under call redirection registration from the subscriber telephone of a movement destination based on control of a service control point.

[0013]The call redirection mistaken by the above can be prevented, and a message can be received also in the subscriber telephone under call redirection registration.

[0014]

[Example]The example of this invention is described with reference to drawings. Drawing 1 is a block lineblock diagram of this invention one example call redirection

method.

[0015]The service switchpoints 102a and 102b which a call redirection method is connected to the public telephone network 108, and perform a telephone exchange in drawing 1. The subscriber telephone 110a connected to the service switchpoints 102a and 102b via the telephone line. Have 110b and 110c and the service switchpoints 102a and 102b. The call redirection point telephone number to the subscriber telephone 110a of the call redirection member A using the call redirection which a self-point accommodates as the first database to store The databases 104a and 104b. A call redirection means to perform call redirection to the subscriber telephone 110c of a movement destination based on the contents of the databases 104a and 104b is included.

[0016]Here the place by which it is characterized [of this invention] The service switchpoint 102a, Have the service control point 101 which controls 102b, and the service switchpoints 102a and 102b. A call redirection point registration means to perform call redirection point registration from the subscriber telephone 110c of a movement destination, and call redirection mode setting based on control of the service control point 101. It is in a call redirection subscriber telephone arrival means to perform arrival to the subscriber telephone 110a under call redirection registration from the subscriber telephone 110c of a movement destination based on control of the service control point 101 being included.

[0017]The service control point 101, The database 103 is included as the second database with which the temporary telephone number beforehand assigned to the call redirection member's A telephone number, the personal identification number, and the telephone number under call redirection registration was set up. A call redirection point registration means to accommodate the subscriber telephone 110c of a movement destination. Based on the mail arrival place change request from the subscriber telephone 110c of a movement destination, start the service control point 101, and The call redirection member's A telephone number. Including a means to answer based on the Request to Send of a transfer destination telephone number and a personal identification number, the service control point 101. The judging means which judges whether the call redirection member A is an available member with reference to the contents of the database 103 based on the call redirection member's A telephone number and personal identification number which were answered [above-mentioned], Based on the decision result of this judging means, with reference to the contents of the database 103, call redirection mode. A call redirection point registration means to accommodate the call redirection member's A subscriber telephone 110a, including a means to transmit the setting request of a temporary telephone number and a transfer destination telephone number to a call redirection point registration means to accommodate a call redirection member's subscriber telephone 110a. Based on the above-mentioned setting request, set the call redirection member's A telephone line 109a as call redirection mode, and The call redirection member's A telephone number. A means to set a temporary telephone number and a call redirection point telephone number as the database 104a, and to perform a setting-out completion report to the service control point 101 is included. The service control point 101 contains a means to transmit a temporary telephone number to a call redirection point registration means to accommodate the subscriber telephone 110c of a movement destination based on the above-mentioned setting-out completion report. A call redirection point registration

means to accommodate the subscriber telephone 110c of a movement destination, A means to set the temporary telephone number transmitted [above-mentioned] as the database 104b, and to report the completion of setting out to the service control point 101, A call redirection subscriber telephone arrival means to accommodate the subscriber telephone 110c of a movement destination in the subscriber telephone 110c of a movement destination including a means to notify the temporary telephone number transmitted [above-mentioned], Including a means to input the temporary telephone number from the subscriber telephone 110c of a movement destination, and to transmit this temporary telephone number to the service control point 101 with reference to the contents of the database 104b, the service control point 101, The means connected to the service switchpoint 102a which accommodates the call redirection member's A subscriber telephone 110a to the service switchpoint 102b which accommodates the subscriber telephone 110c of a movement destination with reference to the database 103 based on the temporary telephone number transmitted [above-mentioned] is included, A call redirection subscriber telephone arrival means to accommodate the call redirection member's A subscriber telephone 110a contains a means to make the call redirection member's A subscriber telephone 110a receive a message with reference to the database 104b.

[0018]The service switchpoint 102a which accommodates the telephone number 110a of the call redirection member A under call redirection registration, Since the call redirection member's A telephone line 109a is mail arrival mode when the telephone number 110a of the call redirection member A under call redirection registration is received, a means to pull out the call redirection point telephone number, and to make it receive a message from the database 104a is included.

[0019]Operation of the call redirection method of such composition is explained. Drawing 2 is a figure showing operation of call redirection point registration of the call redirection method of this invention, and call redirection mode setting. Drawing 3 is a figure showing operation of the call redirection of the call redirection method of this invention. Drawing 4 is a figure showing the mail arrival operation to the subscriber telephone under call redirection registration of the call redirection method of this invention.

[0020]After the member A moves to the member's C position and performs call redirection registration from a movement destination, the call redirection method with which the member B dials the member's A telephone number, and performs call redirection is explained below.

[0021]First, with reference to drawing 1 and drawing 2, registration and the starting method of the call redirection point are explained. Use of the member's A call redirection method is enabled by registering beforehand the member's A telephone number, personal identification number, and temporary telephone number (for example, access code + subscriber phone number) into the database 103 from the input/output terminal 105. The member A uses the member's C telephone 110c and telephone line 109c. If the mail arrival place change request number set up beforehand is dialed, the service switchpoint 102b which has accommodated the telephone line 109c will apply starting to the service control point 101 via the data link 107b. The service control point 101 requires the telephone line 109c as connecting with the sound reproduction device 106 from the service switchpoint 102b. The service switchpoint 102b connects a sound reproduction device to the telephone line 109c, makes the

telephone number, i.e., the member's A telephone number, which should be transmitted dial to the member A, and makes the personal identification number after a telephone number input dial. The dialed number is sent to the service control point 101 via the service switchpoint 102b. The service control point 101 makes the member A choose call redirection setting out or release, when the normality of the dialed number is accepted with reference to the database 103. As opposed to the service switchpoint 102a in which a service control point will accommodate the member's A telephone line 109a via the data link 107a if the member A chooses call redirection setting out, The demand which sets up the telephone number of the demand which sets the telephone line 109a as call redirection mode, the demand which sets up a temporary telephone number, and the destination is performed. The service switchpoint 102a carries out a setting-out completion report to the service control point 101, after setting the member's A data for call redirections as the database 104a according to the demand of the service control point 101. The service control point 101 transmits the temporary telephone number of the telephone line 109a beforehand set as the database 103 to the service switchpoint 102b. The service switchpoint 102b the temporary telephone number of the telephone line 109a in the database 104b after setting out, It tells the member A that the temporary telephone number was assigned to the telephone line 109a through the telephone line 109c with the sound reproduction device 106 at the same time it performs a setting-out completion report to the service control point 101. The member's A destination will be registered by the above and call redirection will be in activation status.

[0022]Next, operation of a call redirection method is explained with reference to drawing 1 and drawing 3. The member B dials the member's A telephone number using the subscriber telephone 110b and the telephone line 109b. Since the telephone line 109a is call redirection mode, the service switchpoint 102a which accommodates the telephone line 109a which should receive a message. The telephone line 109c which is the destination which pulls out a destination number from the database 104a, and is accommodated in the service switchpoint 102b via the public telephone network 108 is made to receive a message. Call redirection is completed by the above.

[0023]Finally with reference to drawing 1 and drawing 4, the mail arrival operation to the telephone line 109a under call redirection registration is explained. If the member A who is in the position of the telephone line 109c dials a temporary telephone number, the service switchpoint 102b will apply starting to the service control point 101 with reference to the database 104b. The service control point 101 is connected to the service switchpoint 102a from the dialed temporary telephone number via the public telephone network 108 to the service switchpoint 102b with reference to the database 103. The service switchpoint 102a makes the telephone line 109a receive a message with reference to the database 104a.

[0024]

[Effect of the Invention]As explained above, this invention has the outstanding effect which can prevent the mistaken call redirection and can receive a message also in the subscriber telephone under call redirection registration.

[Claim(s)]

[Claim 1]Service switchpoint which is connected to a public telephone network and performs a telephone exchange, comprising, Have a subscriber telephone connected to

this service switchpoint via a telephone line, and the above-mentioned service switchpoint, A call redirection method containing the first database that stores a call redirection point telephone number to a subscriber telephone of a call redirection member using call redirection which a self-point accommodates, and a call redirection means to perform call redirection to a subscriber telephone of a movement destination based on the contents of this first database.

A call redirection point registration means by which it has a service control point which controls the above-mentioned service switchpoint, and the above-mentioned service switchpoint performs call redirection point registration from a subscriber telephone of the above-mentioned movement destination, and call redirection mode setting based on control of the above-mentioned service control point.

A call redirection subscriber telephone arrival means to perform arrival to a subscriber telephone under call redirection registration from a subscriber telephone of the above-mentioned movement destination based on control of the above-mentioned service control point.

[Claim 2]The call redirection method comprising according to claim 1:

Beforehand the above-mentioned service control point A call redirection member's telephone number, A call redirection point registration means to accommodate a subscriber telephone of the above-mentioned movement destination, including the second database with which a temporary telephone number assigned to a personal identification number and a telephone number under call redirection registration was set up, Based on a mail arrival place change request from a subscriber telephone of this movement destination, start the above-mentioned service control point, and The above-mentioned call redirection member's telephone number, Including a means to answer based on a Request to Send of a transfer destination telephone number and a personal identification number, the above-mentioned service control point, A judging means this call redirection member judges whether you are an available member with reference to the contents of the second database of the above based on a call redirection member's telephone number and a personal identification number which were answered [above-mentioned] to be.

Based on a decision result of this judging means, with reference to the contents of the second database of the above, call redirection mode, A means to transmit a setting request of a temporary telephone number and a transfer destination telephone number to a call redirection point registration means to accommodate the above-mentioned call redirection member's subscriber telephone is included, A call redirection point registration means to accommodate the above-mentioned call redirection member's subscriber telephone, Based on the above-mentioned setting request, set this call redirection member's telephone line as call redirection mode, and This call redirection member's telephone number, A means to set a temporary telephone number and a call redirection point telephone number as the self-first database, and to perform a setting-out completion report to the above-mentioned service control point is included, The above-mentioned service control point contains a means to transmit a temporary telephone number to a call redirection point registration means to accommodate a subscriber telephone of a movement destination based on the above-mentioned setting-out completion report, A means for a call redirection point registration means to accommodate a subscriber telephone of the above-mentioned movement destination

to set a temporary telephone number transmitted [above-mentioned] as the self-first database, and to report the completion of setting out to the above-mentioned service control point.

A call redirection subscriber telephone arrival means to accommodate a subscriber telephone of the above-mentioned movement destination in a subscriber telephone of this movement destination including a means to notify a temporary telephone number transmitted [above-mentioned], A means to input a temporary telephone number from a subscriber telephone of this movement destination, and to transmit this temporary telephone number to the above-mentioned service control point with reference to the contents of the self-first database is included, The above-mentioned service control point, A means connected to service switchpoint which accommodates the above-mentioned call redirection member's subscriber telephone to service switchpoint which accommodates a subscriber telephone of the above-mentioned movement destination with reference to the second database of the above based on a temporary telephone number transmitted [above-mentioned] is included, A means by which a call redirection subscriber telephone arrival means to accommodate the above-mentioned call redirection member's subscriber telephone makes the above-mentioned call redirection member's subscriber telephone receive a message with reference to the self-first database.

[Claim 3]Service switchpoint which accommodates a telephone number of a call redirection member under above-mentioned call redirection registration, The call redirection method according to claim 1 containing a means to pull out that call redirection point telephone number, and to make it receive a message from the self-first database since this call redirection member's telephone line is mail arrival mode when a telephone number of a call redirection member under this call redirection registration is received.

